

a focal plane array sensor at the distal end of the endoscope that detects Raman scattered radiation directed onto the distal end of the endoscope;

C1 a laser optically connected to the optical fiber at the proximal end of the endoscope to irradiate an object to be imaged; and

a computer having a memory device that is connected to the sensor [for], the memory device storing an electronic representation of the detected radiation.

C2 16. (Amended) The Raman endoscope of Claim 15 further comprising an additional optical fiber within the endoscope to direct light from a broadband light source onto the object to be imaged, the broadband light source being optically coupled to the additional optical fiber.

17. (Amended) The Raman endoscope of Claim 16 further comprising a detector coupled to an optical fiber in the endoscope to record a visible image of the object.

22. (Amended) A Raman endoscope comprising:

an endoscope having an optical fiber extending from a proximal end to a distal end;

C2 Sub F2 a focal plane array sensor at the distal end of the endoscope that detects Raman scattered radiation directed onto the distal end of the endoscope;

a filter system at the distal end of the endoscope that filters light directed onto the focal plane array sensor;

a laser optically connected to the optical fiber at the proximal end of the endoscope to irradiate an object to be imaged; and

C2  
a computer having an electronic memory connected to the sensor such that the memory stores an electronic representation of the detected radiation.

- Sub F2
23. (Amended) The Raman endoscope of Claim 22 further comprising an additional optical fiber extending within the endoscope to direct light from a broadband light source onto the object to be imaged.
24. (Amended) The Raman endoscope of Claim 23 further comprising a detector coupled to an optical fiber in the endoscope to record a visible image of the object.

- Sub D3
- C3
29. (Amended) A method of endoscopic imaging comprising:
- providing a sensor array on a distal end of an endoscope, the endoscope having a fiber optic cable extending from a proximal end of the endoscope to the distal end, the proximal end of the fiber optic cable being optically coupled to a radiation source;
  - positioning the distal end of the endoscope adjacent to tissue to be examined;
  - irradiating a region of interest on the tissue with radiation from the radiation source that is delivered through the fiber optic cable;
  - sensing endogenous fluorescence or Raman scattered light returning to the distal end of the endoscope with the sensor array in response to the irradiation of the region of interest with the radiation, the returning light being directed onto the sensor array at the distal end of the endoscope with a lens;